

CAST's UDL LESSON BUILDER

Lesson Overview:

Title:	Lesson 1-1 Patterns with Exponents and Powers of 10
Author:	Sierra Fellows
Subject:	Math
Grade Level(s):	5
Duration:	90 minutes
Unit Description:	Place Value
Lesson Description for Day:	Finding patterns in place value using exponents and powers of 10
State Standards:	5.NBT.A.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. Mathematical Practices MP.1, MP.2, MP.4, MP.5, MP.6, MP.7

Goals:

Unit Goals:	Students will understand place value relationships between whole numbers and decimals to the thousandths.
Lesson Goals:	Students will use exponents and powers of 10 to calculate products to improve mental math fluency with multi-digit numbers up to the millions.

Barriers:

Barrier:	Strategies to Overcome Barrier:
Students with reading difficulties will not be able to comprehend word problems to solve the math.	Assign online Practice Buddy module that provides audio recordings of each question in place of the workbook pages for independent practice.
Student does not remember the foundation skills of place value from the previous year before beginning the first lesson of the chapter.	Do a brief review of place value concepts from fourth grade with practice questions as an activator.
ELL with limited English vocabulary	Have student preview vocabulary using cards and my online practice activities on Quia

Methods:

Anticipatory Set:	The teacher will complete a brief review of place value and vocabulary from fourth grade using the Review What You Know activity. Students will complete independently, then find a partner to compare answers before receiving answers and feedback from teacher.
Introduce and Model New Knowledge:	Students will access the lesson I-I Visual Learning video through their online Pearson Realize account. This provides a brief engaging video on the upcoming lesson content and introduces vocabulary words and concepts.
Provide Guided Practice:	Students will choose to watch the guided practice video created by teacher in Google Classroom and follow along in workbook, or work with teacher for direct instruction guided practice.
Provide Independent Practice:	<p>Students will begin to follow steps listed on differentiated checklist. They can choose to complete independent practice problems in the workbook or online through the assigned Practice Buddy. Once they finish the independent practice problems they find a partner for collaborative work and choose an activity posted in Google Classroom. Activity options include:</p> <ul style="list-style-type: none"> ● Math and Science Activity ● Enrichment Activity ● Common Core Review ● Marta's Error Challenge <p>Students may work independently if they prefer to do so.</p>

Assessment:

Formative/Ongoing Assessment:	<ul style="list-style-type: none">● Students check in with teacher after completing independent practice problems, and the teacher will check problems. If many errors in understanding are found, teacher will work in small group using Reteach page to review the lesson concepts.● IXL accounts keep track of all work completed on the website, including trouble spots and strengths.● Teacher will check answers/responses for the choice activity that students chose during collaborative learning
Summative/End Of Lesson Assessment:	<p>Students can choose...</p> <ul style="list-style-type: none">● Recap or video posted to blog of what they learned about exponents and powers of 10● Post comment on lesson in Google Classroom about what they learned about exponents and powers of 10 or how they solved a problem● Students can choose to complete the quick check problems assigned on their Pearson Realize website

Materials:

- Laptops
- Differentiated checklists
- Workbooks
- Pencils
- Erasers
- Vocabulary Cards
- Headphones
- Base-ten blocks (if needed)